

**REMARKS**

Claims 1-15 remain pending in this application. Claims 1-15 are rejected. Claim 16 is previously canceled. Claim 1 is amended herein to clarify the invention.

Claims 1-15 have been rejected under 35 U.S.C. § 112, second paragraph, as indefinite. The Office Action stated that in claim 1, lines 4 and 5, the recitations of “at least one” and “the opposite” do not agree since if the channel is present in both first and second substrates that there is no opposite substrate.

Claim 1 has been amended from “the opposite” to “an opposite” in order to clarify the invention. Thus, claim 1 recites that if a first substrate has a channel, an opposite substrate, such as a second substrate, would have two passage openings. If the second substrate also has a channel, then an opposite substrate such as the first substrate would have two passage openings. Thus, each first and second substrate would have two openings. There is nothing in claim 1 that is inconsistent with this scenario and therefore claim 1 is a properly written claim. Accordingly, Applicant respectfully requests that the rejection of claims 1-15 under 35 U.S.C. § 112, second paragraph, be withdrawn. If the Examiner believes that this amendment and explanation are insufficient, Applicant respectfully requests that the Examiner contact Applicant’s attorney

to suggest potential amendments which address her above-noted objections without changing the scope of claim 1.

Claims 1-15 have been rejected under 35 U.S.C. § 103(a) as unpatentable over U.S. Patent No. 6,117,396 (Demers) in view of U.S. Patent No. 5,962,081 (Ohman et al.).

The Office Action on page 3 states that in Demers there are metering capillaries with capillary barriers and that the barriers preselectably prevent premature ejection of the liquid from the metering capillaries. The Office Action is equating these capillary barriers to the membranes recited in claim 1 of the current application. However, claim 1 recites, *inter alia*, that “the passage openings are separated from the channel by a partially permeable sieve-like membrane” (emphasis added). Claim 1 of the current application specifically recites that the membrane preselectably prevents micro-beads and/or cells from entering into the passage openings. As graphically demonstrated in Figure 3 and explained in the top of page 9 of the specification, the reason the membranes are partially permeable is because they allow liquid to pass through them while preventing micro-beads and/or cells from passing. In contrast, as admitted in the Office Action on page 3 and as described in Demers on column 4, lines 19-21, the capillary barriers in Demers serve to prevent liquid from

prematurely leaving the capillaries. Thus, the capillary barriers in Demers are not partially permeable, as recited in claim 1 of the current application.

There is no disclosure in Ohman et al. of a partially permeable sieve-like membrane, as recited in claim 1 of the current application. Thus, the combination of Demers and Ohman et al. fails to disclose or suggest a partially permeable sieve-like membrane, as recited in claim 1. Even if Ohman et al. disclosed a partially permeable sieve-like membrane, such a membrane could not be combined with Demers because the purpose of the capillary barriers in Demers is to block the passage of liquids. As stated by the Federal Circuit, if a proposed modification would render the prior art invention being modified unsatisfactory for its intended purpose, then there is no suggestion or motivation to make the modification. *See In re Gordon*, 733 F.2d 900, 221 USPQ 1125 (Fed. Cir. 1984); *see also* MPEP § 2143.01. Replacing the capillary barriers in Demers with a partially permeable membrane would defeat the purpose of the capillary barriers in Demers, which are supposed to block liquids. Thus, the capillary barriers in Demers are not partially permeable membranes nor can they be replaced with partially permeable membranes, as recited in claim 1 of the current application. Thus, the combination of Demers and Ohman et al. fails to teach or suggest a partially permeable sieve-like membrane, as recited in claim 1.

As stated by the courts, *prima facie* obviousness requires all the claim limitations to be taught or suggested by the prior art. See *In re Royka*, 490 F.2d 981, 180 USPQ 580 (CCPA 1974); see also MPEP § 2143.03. Thus, claim 1 is patentable because the combination of Demers and Ohman et al. fails to disclose or suggest all the limitations of claim 1. Furthermore, claims 2-15 are patentable for being dependent on a patentable base claim. See *In re Fine*, 5 USPQ2d 1596, 1600 (Fed. Cir. 1988). Accordingly, Applicant respectfully requests that the rejection of claims 1-15 under 35 U.S.C. § 103(a) as unpatentable over U.S. Patent No. 6,117,396 (Demers) in view of U.S. Patent No. 5,962,081 (Ohman et al.) be withdrawn.

Claim 1 recites means for temporarily closing at least one of the passage openings and one of the further openings. The Office Action, on page 4, admits that Demers fails to disclose means for temporarily closing at least one of the passage openings and one of the further openings. The Office Action states that Ohman et al. discloses a substrate body with a valve seat for opening and closing the fluid flow of a passage opening and refers to Figure 5A of Ohman et al. However, to combine the teachings of references requires suggestion or incentive to do so. See *In re Fine*, 5 USPQ2d 1596, 1599 (Fed. Cir. 1988). The rationale in the Office Action for the combination is “to redirect flow of the liquid and thus permitting to selectively transport the mobile phase/or stationary

phase as a suspension.” However, there is no indication in Demers that there is a need to redirect flow and there is no suspension to be transported in Demers. Thus, there is no reason to close a passage opening in Demers, as recited in claim 1. Accordingly, claim 1 is patentable over Demers in view of Ohman et al. and notice to that effect is respectfully requested. Claims 2-15 are patentable at least for the reason that they depend from a patentable base claim. *See In re Fine*, 5 USPQ2d 1596, 1600 (Fed. Cir. 1988). Applicants therefore respectfully requests that the rejection of claims 1-15 over Demers in view of Ohman et al. be withdrawn.

Since the present application is a national stage application of a PCT application, the priority document was filed with the International Bureau. The Examiner is respectfully requested to obtain the priority document from the PCT/designated office unit in the U.S. Patent Office and acknowledge receipt thereof.

The USPTO is hereby authorized to charge any fee(s) or fee(s) deficiency or credit any excess payment to Deposit Account No. 10-1250.

In light of the foregoing, the application is now believed to be in proper form for allowance of all claims and notice to that effect is earnestly solicited.

Respectfully submitted,  
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